Lesson planning practice

Use learning from last week's introduction to lesson planning to plan an exemplar KS3 lesson.

Starter retrieval task. How many of the ten metacognitive strategies can you name on your own. What about as a group?

Exemplar metacognitive strategies

Technique	Description
1. Elaborative interrogation	Generating an explanation for why an explicitly stated fact or concept is true
2. Self-explanation	Explaining how new information is related to known information, or explaining steps taken during problem solving
3. Summarization	Writing summaries (of various lengths) of to-be-learned texts
4. Highlighting/underlining	Marking potentially important portions of to-be-learned materials while reading
5. Keyword mnemonic	Using keywords and mental imagery to associate verbal materials
6. Imagery for text	Attempting to form mental images of text materials while reading or listening
7. Rereading	Restudying text material again after an initial reading
8. Practice testing	Self-testing or taking practice tests over to-be-learned material
9. Distributed practice	Implementing a schedule of practice that spreads out study activities over time
10. Interleaved practice	Implementing a schedule of practice that mixes different kinds of problems, or a schedule of study that mixes different kinds of material, within a single study session

Note. See text for a detailed description of each learning technique and relevant examples of their use.

Donker, A. S., de Boer, H., Kostons, D., Dignath van Ewijk, C. C., & van der Werf, M. P. C. (2014) Effectiveness of learning strategy instruction on academic performance: A meta-analysis. *Educational Research Review*, *11*, 1–26. https://doi.org/10.1016/j.edurev.2013.11.002. (Table taken from p6)

Linked CCF statements section 2

- Learn that:

- Regular purposeful practice of what has previously been taught can help consolidate material and help pupils remember what they have learned.
- Worked examples that take pupils through each step of a new process are also likely to support pupils to learn.

- following expert input learn how to:
- Balance exposition, repetition, practice and retrieval of critical knowledge and skills.

Linked CCF statements CCF 4

- **Learn that**

- Effective teachers introduce new material in steps, explicitly linking new ideas to what has been previously studied and learned.
- Explicitly teaching pupils metacognitive strategies linked to subject knowledge, including how to plan, monitor and evaluate, supports independence and academic success

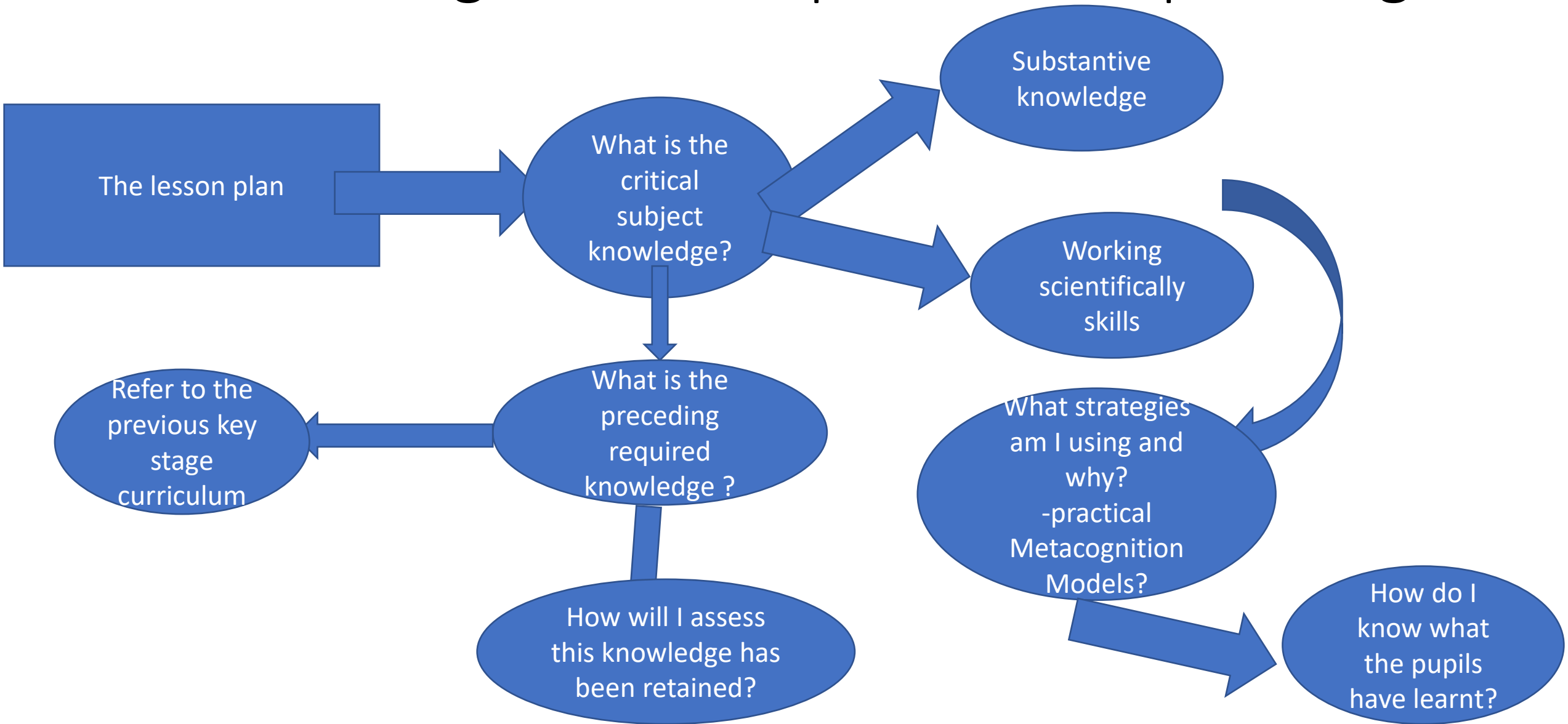
- Learn how to make good use of expositions, by:

• Discussing and analysing with expert colleagues how to use concrete representation of abstract ideas (e.g. making use of analogies, metaphors, examples and non-examples).

And - following expert input - by taking opportunities to practise, receive feedback and improve at:

• Starting expositions at the point of current pupil understanding.

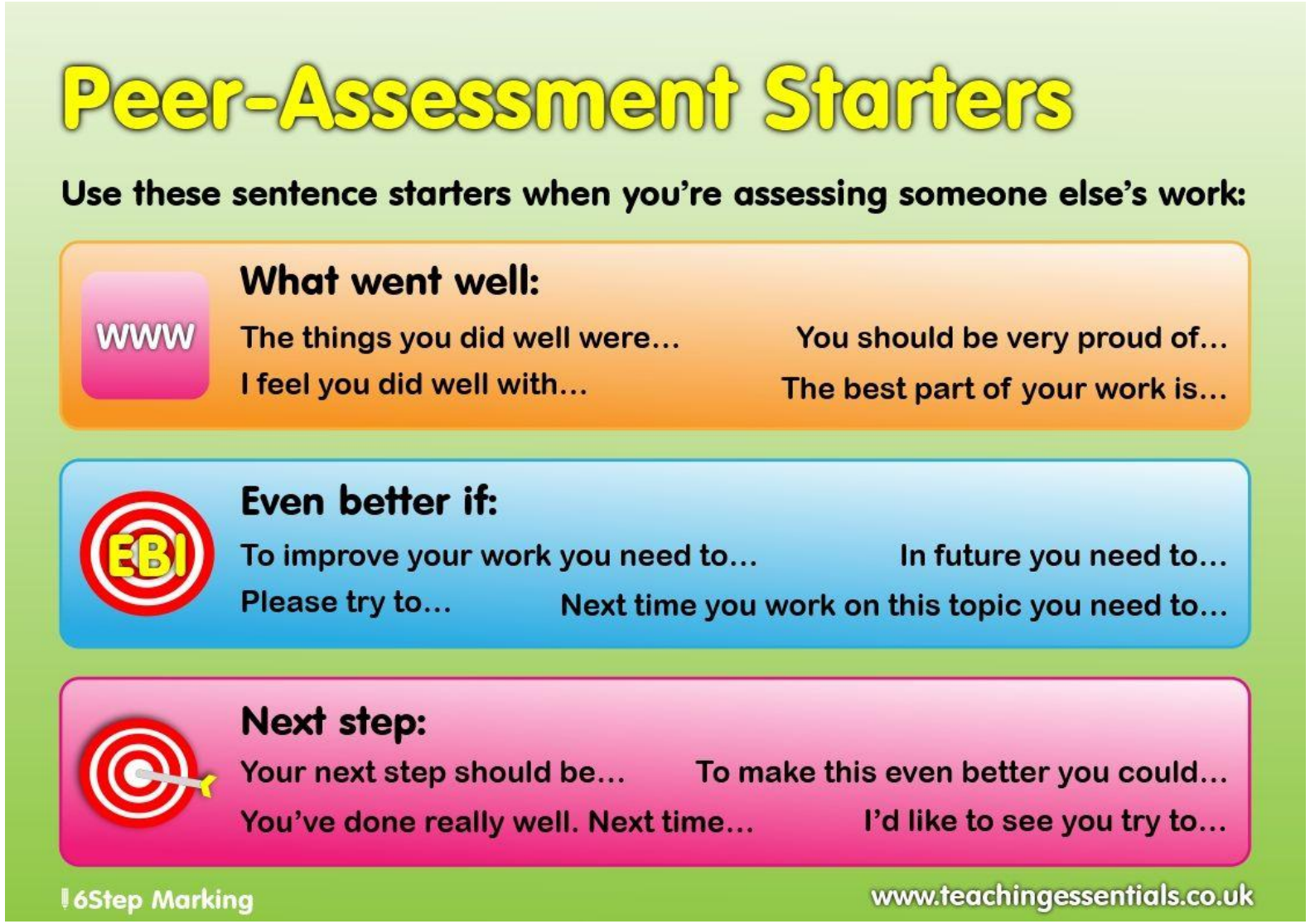
Constructing a mind map for lesson planning



Task

- In a group of 2-3 people. Plan a lesson on solids liquids and gasses
- The key learning point is the particulate structure of solids liquids and gases (KS3)
- Use the mind map on the previous slide to
- fill in the pre supposed learning section .
- Complete the what the teacher does section and what the student does section of the lesson plan- remember the seven step metacogntive plan from last week.
- What resources will you use?
- How long will each activity take?
- If you need some ideas read Deans for impact (2015). The science of learning available at: https://deansforimpact.org/wp-content/uploads/2016/12/The_Science_of_Learning.pdf

Review of lesson plans



Final reflection

Linked references for the session

- *Deans for Impact (2015) The Science of Learning [Online] Accessible from: https://deansforimpact.org/resources/the-science-oflearning/. [retrieved 10 October 2018].

- Donker, A. S., de Boer, H., Kostons, D., Dignath van Ewijk, C. C., & van der Werf, M. P. C. (2014) Effectiveness of learning strategy instruction on academic performance: A meta-analysis. *Educational Research Review*, *11*, 1–26. https://doi.org/10.1016/j.edurev.2013.11.002.

- Education Endowment Foundation (2017) Metacognition and Self-regulated learning Guidance Report. [Online] Accessible from: https://educationendowmentfoundation.org.uk/education-evidence/guidance-reports/metacognition

- Education Endowment Foundation (2018) Improving Secondary Science Guidance Report. [Online] Accessible from: https://educationendowmentfoundation.org.uk/education-evidence/guidance-reports/science-ks3-ks4

- Also available on the science section of the Moodle pre reg site.